

Dubouzetia saxatilis (Elaeocarpaceae), a new species from north Queensland, Australia

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Summary

Bean, A.R. & Jessup, L.W. (1997). *Dubouzetia saxatilis* (Elaeocarpaceae), a new species from north Queensland, Australia. *Austrobaileya* 4(4): 673–675. *Dubouzetia saxatilis* A.R.Bean & Jessup is described, illustrated and compared with related species. A key to the Australian species of *Dubouzetia* is presented.

Keywords: taxonomy, Elaeocarpaceae, *Dubouzetia*, *Dubouzetia saxatilis*, Australian flora.

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Introduction

Dubouzetia Pancher ex Brongn. & Gris is a genus of woody shrubs and trees which was first validly described in 1861 with one species. A second species was described in 1863 by the same authors. The first generic revision was provided by Sprague (1907) who enumerated five species, all endemic to New Caledonia. The genus was first recorded for New Guinea by Smith (1944) who named two additional species. The New Caledonian species were revised by Viot & Guillaumin (1963). Coode (1978) recorded the genus from West Ceram in the Moluccas and named two further species from New Guinea.

In the most recent revision of the genus, Coode (1987) named *D. australiensis* from the Northern Territory, thus providing the first record of the genus from Australia. In all, he recognised 10 species with most occurring in New Guinea and New Caledonia but also the Moluccas (1 sp.) and northern Australia (1 sp.).

This paper describes a second Australian species from near Townsville in northern Queensland.

It is notable that both Australian species are shrubby cliff dwellers, whereas the remaining species in the genus are plants of low to tall forest, and are not associated with cliffs.

Taxonomy

***Dubouzetia saxatilis* A.R.Bean & Jessup sp. nov.** *Dubouzetiae australiensis* affinis a qua foliis brevioribus angustioribus saepe crenulatis, sepalis brevioribus obtusis, antheris brevioribus, disco sparsim piloso profundius lobato et ovario piloso inter lobos differt. **Typus:** Queensland. NORTH KENNEDY DISTRICT: 1 km NNW of Frederick Peak, 25 km SW of Townsville, 19°24'S 146°37'E, 5 May 1991, A.R. Bean 3094 (holo: BRI (1 sheet + spirit); iso: K, MEL, distribuendi).

Shrub c. 50 cm diameter, growing horizontally from vertical cliff-faces. Branchlets terete, shortly pubescent. Stipules deltate, c. 0.5 mm long, caducous. Leaves spirally arranged; petioles 3–5 mm long, pubescent, channeled above; blades ovate or elliptic, 3.1–6.8 × 1.5–2.6 cm, 1.7–3.4 times as long as broad with apex acute and base cuneate to obtuse, glabrous on upper surface, pubescent on lower surface principally along veins, with numerous papilla-like hair-bases throughout; venation penninerved, with 7–9 pairs of lateral veins branching towards margin; reticulate venation well developed; intramarginal vein absent; leaf margins crenulate or denticulate, sinuate or rarely entire. Flowers 5-merous, bisexual, borne in condensed axillary racemes; flowers 3–6 per inflorescence, each subtended by a pale reddish-

brown pubescent, caducous bract, 1.5–2 × c. 0.5 mm. Pedicels 12–21 mm long, hairy; sepals white, broadly-ovate to orbicular, 3–5.5 × 2.1–4.5 mm, shortly pubescent on both sides, apex obtuse; petals white, elliptical or narrowly-obovate, 8–10.5 × 3.8–4.5 mm, entire, each with 2 pockets at the base, pubescent on the adaxial surface; disc sparsely pilose, annular, deeply lobed, the lobes intruding into the petal pockets. Stamens 38–44, inserted on the disc near the base of the lobes and towards the inner margin near the ovary; filaments usually sinuous, 2–2.6 mm long, with numerous spreading hairs; anthers oblong, 1.25–1.5 mm long, puberulent, 4-lobed in section, opening by a terminal pore. Ovary superior, ovoid to globular, very shallowly 3- or 4-lobed, 2–2.5 mm long, glabrous on outside except for 3 or 4 longitudinal lines of hairs between the locular lobes, 3(4)-locular, locules 7-ovulate, sparsely or scattered-pilose on the inside. Style single, terete or tapered, shallowly grooved near apex, often twisted, 4.5–5 mm long; stigma inconspicuous, pointed. Fruit a thin-walled, 3(4)-lobed capsule c. 9 mm long and c. 11 mm in diameter. Seeds ellipsoidal, 3–3.5 mm long, c. 2 mm in diameter, brown, sparsely pilose, with a waxy terminal strophiole.

Additional specimens examined: Queensland. NORTH KENNEDY DISTRICT: 1 km NNW of Frederick Peak, 25 km SW of Townsville, Jun 1991, *Bean* 3283 (AD, BRI, DNA, K, MEL); ditto, Jun 1991, *Bean* 3282, 3284 (BRI); Frederick Peak, The Pinnacles, Dec 1993, *Cumming* 12576 (BRI).

Distribution and habitat: *D. saxatilis* is known only from the type locality, 25 km south-west of Townsville in north Queensland. It grows on the sheer faces of two adjacent unnamed rhyolite peaks, close to, but separated from Frederick Peak. It occurs on all sides of these peaks, taking root in crevices. It is associated with other shrubs and herbs, including *Rhodomyrtus trineura* (F.Muell.) Benth. subsp. *trineura*,

Leptospermum neglectum Joy Thomps. and *Polycarphaa spirostylis* F.Muell. The surrounding vegetation type is mostly open eucalypt forest, but includes small areas of closed forest.

Phenology: Flowers and fruits have been collected in May, June and December, but full phenology is unknown. Possibly the species bears flowers and fruits throughout the year.

Affinities: *D. saxatilis* is closely related to *D. australiensis* Coode but differs by its shorter and narrower, often crenulate leaves, shorter obtuse sepals, shorter anthers, more deeply lobed disc and the ovary with lines of hairs between the locular lobes. From all other *Dubouzetia* species, it can be distinguished by its relatively small petals and mostly glabrous ovary.

It belongs to *D.* sect. *Oligovula* Coode (Coode 1987), because of the relatively few (<8) ovules per loculus and the relatively small petals and fruits.

Conservation Status: The risk category for *Dubouzetia saxatilis*, according to the criteria of Chalson & Keith (1995) is 'endangered' (criteria B2, B5 and D2). The species is known only from the type locality. It is under threat because of its small population size (less than 1000 plants have been observed) and its specialised habitat.

The recommended conservation coding for this species as defined by the Queensland *Nature Conservation Act 1992* is 'endangered'.

Etymology: The specific epithet is from the Latin *saxatilis*, meaning 'dwelling or found among rocks', in reference to the habitat occupied by the species.

Key to Australian species of *Dubouzetia*

1. Leaves 7.5–13 cm long; sepals deltate to narrowly-ovate, 6–7.5 mm long, with apex acute; anthers 1.5–2.1 mm long; ovary glabrous **D. australiensis**
- Leaves 3.1–6.8 cm long; sepals broadly ovate to orbicular, 3–5.5 mm long, with apex obtuse; anthers 1.25–1.5 mm long; ovary with lines of hairs between the locular lobes **D. saxatilis**

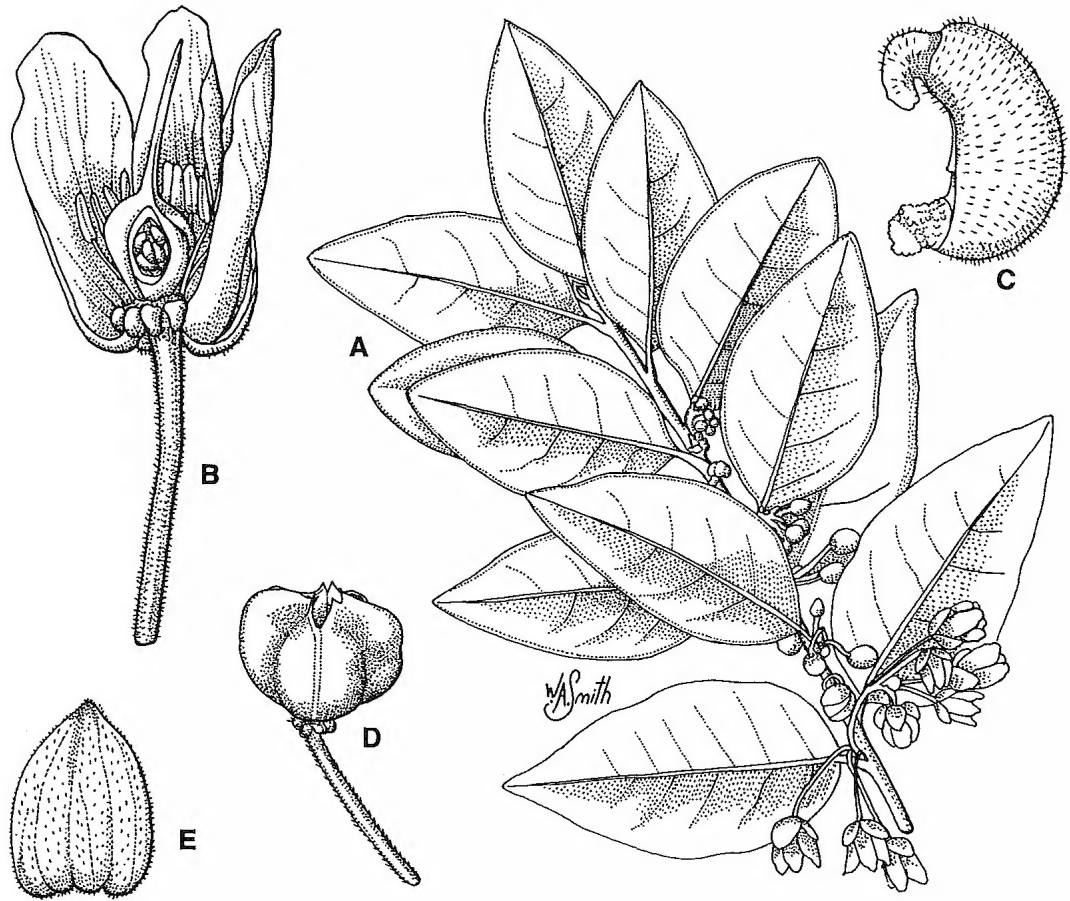


Fig. 1. A–E: *Dubouzetia saxatilis* A. flowering branchlet $\times 1$. B. longitudinal section of flower $\times 4$. C. sepal $\times 4$. D. fruit in early stages of dehiscence, $\times 2$. E. lateral view of seed $\times 8$. A, Bean 3283; B–D, Bean 3094; E, Bean 3282.

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